ESI

EnviroSystems, Inc.
One Lafayette Road
P.O. Box 778
Hampton, N.H. 03843-0778
p 603 926 3345 · f 603 926 3521
envirosystems.com

February 1, 2011

Mr. Darrell Interess
Triumvirate Environmental
61 Inner Belt Road
Somerville, Massachusetts 02143

Dear Mr. Interess:

Enclosed, please find one (1) copy of our report presenting the results of toxicity tests completed using an effluent sample collected from the Exxon Mobil Terminal located in Everett, Massachusetts during January 2011. Acute toxicity was evaluated using the marine species, *Americamysis bahia*.

Please do not hesitate to call me, Kirk Cram or Petra Karbe should you have any questions regarding the report.

Sincerely,

EnviroSystems, Incorporated

Kenneth A. Simon
President

Enclosure
WET Test Report Certification
Report Number 20585-11-01
One (1) copy

cc: Mr. Arthur Powers - Exxon Mobil (1 copy)

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February 1, 2011

Mr. Arthur Powers
Exxon Mobil
52 Beacham Street
Everett, Massachusetts 02149

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cc: Mr. Darrell Interess - Triumvirate Environmental (1 copy)

TOXICOLOGICAL EVALUATION
OF A TREATED INDUSTRIAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
January 2011

Exxon Mobil
Everett, Massachusetts
NPDES Permit Number MA0000833

Prepared For

Exxon Mobil
52 Beacham Street
Everett, Massachusetts 02149

By

EnviroSystems, Incorporated
One Lafayette Road
Hampton, New Hampshire 03842

January 2011
Reference Number Exxon Mobil20585-11-01

STUDY NUMBER 20585

EXECUTIVE SUMMARY

The following summarizes the results of an acute exposure bioassay performed during January 2011 in support of the NPDES biomonitoring requirements of the Exxon Mobil terminal located in Everett, Massachusetts. An acute definitive assay was completed using the marine species, *Americamysis bahia*.

A. bahia were ≤5 days old at the start of the test. Dilution water, provided by ESI, was from the Hampton-Seabrook Estuary. This water is classified as SA-1 and has been used to culture marine test organisms since 1981.

Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications except where otherwise noted. The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s).

Results from the acute exposure assay and their relationship to permit limits are summarized in the following matrix.

Acute Toxicity Evaluation

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Meets Permit Limit	Assay Meets Protocol Limit
Americamysis bahia	48 Hours	>100%	100%	>50%	Yes	Yes

TOXICOLOGICAL EVALUATION OF A TREATED INDUSTRIAL EFFLUENT BIOMONITORING SUPPORT FOR A NPDES PERMIT: January 2011

Exxon Mobil
Everett, Massachusetts
NPDES Permit Number MA0000833

1.0 INTRODUCTION

This report presents the results of an acute toxicity test completed on an effluent sample collected from the Exxon Mobil terminal located in Everett, Massachusetts. The sample was provided by Triumvirate Environmental, Somerville, Massachusetts. Testing was based on programs and protocols developed by the US EPA (2002) and involved completing a 48 hour acute toxicity test with the marine species, *Americamysis bahia*. Testing was performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire in accordance with the provisions of the NELAC Standards (2000).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test animals are exposed to each effluent concentration and a control for a specified period. In acute tests, mortality data for each concentration are used to calculate (by regression) the median lethal concentration, or LC-50, defined as the effluent concentration which kills half of the test animals. Samples with high LC-50 values are less likely to cause significant environmental impacts. The acute no observed effect concentration (A-NOEC) provides information on the effluent concentration having minimal acute effects in the environment and is defined as the highest tested effluent concentration that causes no significant mortality.

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples. See Section 4.0 for a list of references.

2.2 Test Species

When necessary, *A. bahia* were acclimated to approximate test conditions prior to use in the assay and then transferred to test chambers using a large bore glass pipet, minimizing the amount of water added to test solutions.

2.3 Effluent and Laboratory Water

Effluent collection information is provided in Table 1. Samples were stored at 4°C and warmed to 25±1°C prior to preparing test solutions. Effluent used in the *A. bahia* assay was salinity adjusted to 25±2 ppt using artificial sea salts according to protocol (EPA 2002). Laboratory water was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1 and has been used to culture marine test organisms since 1981.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in the effluent sample. Samples with ≥0.02 mg/L TRC were dechlorinated using sodium thiosulfate (EPA 2002).

2.4 Acute Toxicity Tests

Test concentrations for the assay were 100%, 50%, 25%, 12.5%, and 6.25% effluent. The 48 hour toxicity tests were conducted at 25±1°C with a photoperiod of 16:8 hours light:dark. Test chambers for the acute assays were 250 mL glass beakers containing 200 mL test solution in each of 4 replicates with 10 organisms/replicate. Survival and dissolved oxygen were measured daily in all replicates. Temperature, salinity pH and specific conductivity were measured daily in one replicate of each test treatment.

2.5 Data Analysis

Data analysis involved, as required, determination of LC-50 values using CETIS, Comprehensive Environmental Toxicity Information System, software. The program computes LC-50 values using the Spearman-Karber and Linear Regress (Probit) methods following protocol guidelines. If survival in the highest test concentration was >50%, LC-50 values were obtained by direct observation of the raw data. The A-NOEC was determined as the highest test concentration with caused no significant mortality.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are completed on a regular basis for each test species. These results provide relative health and response data while allowing for comparison with historic data sets. See Table 2 for details.

3.0 RESULTS AND DISCUSSION

Results of the acute exposure bioassay completed using *A. bahia* are summarized in Table 3. Effluent and dilution water characteristics are presented in Table 4. Toxicity test summary sheets are included after the tables. Support data, including copies of laboratory bench sheets, are included in Appendix A.

Minimum test acceptability criteria require ≥90% survival in the control concentrations. Achievement of these results indicate that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

4.0 LITERATURE CITED

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th edition. Washington D.C.

National Environmental Laboratory Accreditation Conference: Quality Systems. Chapter 5. June 2000.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

US EPA. 2008. *Attachment G: NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting Tips and Common Pitfalls.* US EPA Region I Offices, Boston, Massachusetts.

TABLE 1. Summary of Sample Collection Information.
Exxon Mobil Terminal Effluent Evaluation. January 2011.

Sample Description	Type	Collection Date	Collection Time	Receipt Date	Receipt Time	Arrival Temp °C
Outfall 001 A	Grab	01/18/11	1525	01/19/11	1045	6

TABLE 2. Summary of Reference Toxicant Data.
Exxon Mobil Terminal Effluent Evaluation. January 2011.

Date	Endpoint		Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
A. bahia						
01/07/11	Survival	LC-50 - 48 Hr	20.8	22.2	18.1 - 26.2	SDS (mg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays

TABLE 3. Summary of Acute Evaluation Results.
Exxon Mobil Terminal Effluent Evaluation. January 2011.

			Survival				
Species	Exposure	Lab	6.25%	12.5%	25%	50%	100%
A. bahia	48 hours	100%	100%	100%	100%	97.5%	100%

TABLE 4. Summary of Effluent and Diluent Characteristics. Exxon Mobil Terminal Effluent Evaluation. January 2011.

PARAMETER	UNITS	EFFLUENT	LABORATORY WATER
pH - As Received	SU	7.46	7.88
pH- Salinity Adjusted	SU	7.88	-
Salinity - As Received	ppt	1	25
Salinity - Salinity Adjusted	ppt	24	-
TRC	mg/L	<0.02	<0.02
Total Solids	mg/L	970	29000
Total Suspended Solids	mg/L	<10	<10
Ammonia	mg/L as N	0.95	0.1
Total Organic Carbon	mg/L as C	5.6	<0.8
Aluminum, total	mg/L	0.021	-
Cadmium, total	mg/L	<0.0005	-
Calcium, total	mg/L	55	-
Chromium, total	mg/L	<0.002	-
Copper, total	mg/L	<0.002	-
Lead, total	mg/L	0.002	-
Magnesium, total	mg/L	8.4	-
Nickel, total	mg/L	<0.002	-
Zinc, total	mg/L	0.018	-

Additional water quality and analytical chemistry support data are available in Appendix A.

TOXICITY TEST SUMMARY SHEET

FACILITY NAME: Exxon Mobil Everett Terminal
NPDES PERMIT NO.: MA0000833
TEST START DATE: 01/19/11
TEST END DATE: 01/21/11

TEST TYPE	TEST SPECIES	SAMPLE TYPE	SAMPLE METHOD
X Acute	___ *Pimephales promelas*	___ Prechlorinated	X Grab
___ Chronic	___ *Ceriodaphnia dubia*	___ Dechlorinated	___ Composite
___ Modified Chronic (Reporting Acute Values)	___ *Daphnia pulex*	___ Chlorine Spiked in Lab	___ Flow-thru
	X *Americamysis bahia*	___ Chlorinated on Site	___ Other
___ 24 Hour Screen	___ *Cyprinodon variegatus*	___ Unchlorinated	
	___ *Menidia beryllina*	X No Detectable Chlorine Upon Receipt	
	___ *Arbacia punctulata*		
	___ *Champia parvula*		
	___ *Selenastrum capricornutum*		

DILUTION WATER:

___ Receiving water collected at a point upstream or away from the discharge, free from toxicity or other sources of contamination; Receiving Water Name: _____

X Alternate surface water of known quality and hardness, to generally reflect the characteristics of the receiving water; Receiving Water Name: Hampton Estuary

___ Synthetic water prepared using either Millipore Milli-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water.

___ Artificial sea salts mixed with deionized water

___ Deionized water and hypersaline brine

___ Other

EFFLUENT SAMPLING DATES: 01/18/11 _____ _____ _____

EFFLUENT CONCENTRATIONS TESTED (%): 6.25%, 12.5%, 25%, 50%, 100%

Permit Limit Concentration: >50 %

Was the effluent salinity adjusted? Yes If yes, to what level? 24 ppt

REFERENCE TOXICANT TEST DATE: 01/07/11 LC-50: 20.8 mg/L Sodium Dodecyl Sulfate

PERMIT LIMITS AND TEST RESULTS

Test Acceptability Criteria

Mean Control Survival: 100%

LIMITS		**RESULTS**	
LC-50:	>50 %	LC-50	>100%
		Upper Limit:	-
A-NOEC:	____ %	Lower Limit:	-
		Method:	
C-NOEC:	____ %	A-NOEC	100%
		C-NOEC	-
IC- ___	____ %	IC- ____	-

APPENDIX A

DATA SHEETS

STATISTICAL SUPPORT

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
Ceriodaphnia dubia, Daphnia pulex	EPA-821-R-02-012
Pimephales promelas	EPA-821-R-02-012
Americamysis bahia	EPA-821-R-02-012
Menidia beryllina, Cyprinodon variegatus	EPA-821-R-02-012
Chronic Exposure Bioassays:	
Ceriodaphnia dubia	EPA-821-R-02-013, 1002.0
Pimephales promelas	EPA-821-R-02-013, 1000.0
Cyprinodon variegatus	EPA-821-R-02-014, 1004.0
Menidia beryllina	EPA-821-R-02-014, 1006.0
Arbacia punctulata	EPA-821-R-02-014, 1008.0
Champia parvula	EPA-821-R-02-014, 1009.0
Trace Metals:	
ICP Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20th Edition - Method 5310 C
Specific Conductance	Standard Methods 20th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20th Edition - Method 4500NH3G
pH	Standard Methods 20th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20th Edition - Method 2540B
Solids, Total Dissolved (TDS)	Standard Methods 20th Edition - Method 2540C
Solids, Total Suspended (TSS)	Standard Methods 20th Edition - Method 2540D
Dissolved Oxygen	Standard Methods 20th Edition - Method 4500-O G

ACUTE BIOASSAY DATA SUMMARY

STUDY: 20585	SAMPLE RECEIVED	"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES										
CLIENT: Exxon Mobil	TEST ORGANISM: *A. bahia*		TRC	TS/S	AMM	TOC	Metals	HARD	SAL	PH	S/C	OTHER
SAMPLE: Terminal Effluent	ORGANISM SUPPLIER	EFF	<0.02	005	004	003	002		1.0	7.46	1928	
DILUENT:	ORGANISM BATCH/AGE	DIL	<0.02	014	015	013			25	7.88	39090	

SALINITY ADJUSTMENT RECORD : 4000 ML EFFLUENT + 110 G SEA SALTS (A-2897) = 100% ACTUAL PERCENTAGE

CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C)			S/C (µmhos/cm)			SALINITY (ppt)			COMMENTS
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48	0	24	48	
LAB	A	10	10	10	7.0	6.5	5.7	7.88	7.82	7.71	24	24	24	39090	38820	39870	25	25	26	
	B	10	10	10	7.0	6.5	5.8													
	C	10	10	10	7.0	6.5	5.8													
	D	10	10	10	7.0	6.5	5.9													
~~RW~~ (F3) lc 1/19	A																			
	B																			
	C																			
	D																			
6.25%	A	10	10	10	7.1	6.4	6.1	7.91	7.91	7.87	24	24	24	39280	39720	40520	25	25	26	
	B	10	10	10	7.1	6.4	6.0													
	C	10	10	10	7.1	6.5	6.0													
	D	10	10	10	7.1	6.4	6.1													
12.5%	A	10	10	10	7.2	6.3	5.6	7.91	7.95	7.86	24	24	24	39200	39810	40340	25	25	26	
	B	10	10	10	7.2	6.4	5.8													
	C	10	10	10	7.2	6.4	5.9													
	D	10	10	10	7.2	6.4	5.9													

ACUTE BIOASSAY DATA SUMMARY

STUDY: 20585	SAMPLE RECEIVED	"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES									
CLIENT: Exxon Mobil	TEST ORGANISM: *A. bahia*		TRC	TS/S	AMM	TOC	ALK	HARD	SAL	PH	S/C	OTHER
SAMPLE: Terminal Effluent	ORGANISM SUPPLIER	EFF	see page 1 of 2									
DILUENT:	ORGANISM BATCH/AGE	DIL										

SALINITY ADJUSTMENT RECORD : ML EFFLUENT + G SEA SALTS = 100% ACTUAL PERCENTAGE

CONC	REP	SURVIVAL			DO (mg/L)			pH (SU)			TEMP (°C)			S/C (µmhos/cm)			SALINITY (ppt)			COMMENTS
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48	0	24	48	
25%	A	10	10	10	7.4	6.3	5.8	7.91	8.01	7.98	24	24	24	39160	39680	40180	25	25	26	
	B	10	10	10	7.4	6.3	5.8													
	C	10	10	10	7.4	6.3	5.7													
	D	10	10	10	7.4	6.3	5.7													
50%	A	10	10	9	7.6	6.4	5.9	7.90	8.10	8.09	24	24	24	38850	39440	40000	25	25	26	
	B	10	10	10	7.6	6.4	5.8													
	C	10	10	10	7.6	6.3	5.8													
	D	10	10	10	7.6	6.2	5.9													
100%	A	10	10	10	9.0	6.3	5.3	7.88	8.19	8.24	24	24	24	38020	38940	39690	24	25	25	
	B	10	10	10	9.0	5.3	5.5													
	C	10	10	10	9.0	6.3	5.5													
	D	10	10	10	9.0	5.6	4.9													
DATE		1/19/11	1/20	1/21	1/19/11	1/20	1/21													
TIME		1620	1450	1530	1420	1445	1520													
INITIALS		VL	DM	LB	VL	DM	LB													

Rec: 1/19/11

Aquatic Research Organisms

DATA SHEET

I. Organism History

Species: Americamysis bahia

Source: Lab reared ✓ Hatchery reared ____ Field collected ____

Hatch date: 1-16-11 Receipt date: ____

Lot number: 011611MS Strain: ____

Brood origination: Florida

II. Water Quality

Temperature 25 °C Salinity ≃30 ppt D.O. — ppm

pH 7.8 su Hardness — ppm Alkalinity — ppm

III. Culture Conditions

Freshwater ____ Saltwater ✓ Other ____

Recirculating ✓ Flow through ____ Static ____

DIET: Flake food ✓ Phytoplankton ____ Trout chow ✓

Artemia ✓ Rotifers ____ YCT ____ Other Encap. Shrimp Diet

Prophylactic treatments: ____

Comments: ____

IV. Shipping Information

Client: EST # of Organisms 320+

Carrier: ____ Date shipped 1-19-11

Biologist: ____

PO BOX 1271 HAMPTON NH 03843-1271 (603) 926-1650 AROFISH@AOL.COM

DILUTIONS PREPARATIONS

STUDY:	CLIENT: Exxon Mobil	
SPECIES: *A. bahia*		
Diluent: Receiving Water (RW)	Sample:	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	0	800
~~RW~~ ES 1/19	—	↓
6.25%	50	↓
12.5%	100	↓
25%	200	↓
50%	400	↓
100%	800	↓
INITIALS:		
TIME:	1410	
DATE:	1/19/11	

RECORD OF METERS USED

STUDY: 20585		CLIENT: Exxon Mobil	
A.bahia			
Exposure (Hours)			
	0	24	48
Water Quality Station #	1	1	1
Initials / Date	KL 1/19/11	DA 1/20	UB 1/21

Water Quality Station #1		Water Quality Station #2		COMMENTS
DO meter #	24	DO meter #		
DO probe #	89	DO probe #		
pH meter #	1097	pH meter #		
pH probe #	93	pH probe #		
S/C meter #	YSI 30E	S/C meter #		
S/C probe #	↓	S/C probe #		
Salinity meter #	↓	Salinity meter #		

Report No: 20585 SDG:
Project: ExxonMobil

Sample ID: Outfall 001 A
Matrix: Water
Sampled: 01/18/11 1525

Parameter		Result		Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	20585-005	970	R1	10	mg/L	01/31/11 1019	02/01/11 1141	EAL/SM2540B
Total suspended solids	20585-005	ND		10	mg/L	01/24/11 1425	01/25/11 1423	EAL/SM 2540D
Ammonia-N	20585-004	0.95		0.1	mg/L as N	01/21/11 0941	01/21/11 0941	EAL/SM 4500-NH3 G
Total organic carbon	20585-003	5.6		0.8	mg/L	01/27/11	01/27/11	EAL/SM 5310 C
Aluminum, total	20585-002	0.021	B(0.033)	0.02	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Cadmium, total	20585-002	ND		0.0005	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Calcium, total	20585-002	55		0.05	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Chromium, total	20585-002	ND		0.002	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Copper, total	20585-002	ND		0.002	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Lead, total	20585-002	0.002		0.0005	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Magnesium, total	20585-002	8.4		0.05	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Nickel, total	20585-002	ND		0.002	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8
Zinc, total	20585-002	0.018		0.002	mg/L	01/26/11 1030	01/26/11	JLH/EPA 200.8

Notes:
B = Analyte found in laboratory blank at value indicated. Sample result may be affected.
R1 = Analysis performed beyond recommended holding time.

ND = Not Detected

EnviroSystems, Inc. P.O. Box 778 Hampton, NH 03842-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

Report No: 20556 SDG:
Project: Diluent - Laboratory Seawater

Sample ID: Lab Salt 01/19/11
Matrix: Water
Sampled: 01/19/11 1645

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total solids	20556-013	29000	50	mg/L	01/18/11 1005	01/20/11	EAL/SM2540B
Total suspended solids	20556-014	ND	10	mg/L	01/24/11 1425	01/25/11 1423	EAL/SM 2540D
Ammonia-N	20556-015	0.1	0.1	mg/L as N	01/21/11 0924	01/21/11 0924	EAL/SM 4500-NH3 G
Total organic carbon	20556-013	ND	0.8	mg/L	01/20/11	01/20/11	EAL/SM 5310 C

Notes:

ND = Not Detected

EnviroSystems, Inc. P.O. Box 778 Hampton, NH 03842-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

ESI

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	20585		
SDG No:			
Project:	ExxonMobil		
Delivered via:	ESI		
Date and Time Received:		Date and TIme Logged into Lab:	01/19/11 1335
Recieved By:	PK	Logged into Lab by:	LB LB
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	6C	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):			
COC Complete:	Yes	Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
Outfall 001 A	20585-001	W	AB48AD StartSample	1gal p	4C	
Outfall 001 A	20585-002	W	Total Metals Cd,Cr,Ni,Pb,Cu,Zn,Al,Ca,Mg;	250mL p	HNO3	
Outfall 001 A	20585-003	W	TOC	60mL p	H2SO4	
Outfall 001 A	20585-004	W	NH3;	125mL p	H2SO4	
Outfall 001 A	20585-005	W	TS, TSS	250mL p	4C	

Notes and qualifications:

20585

ESI

P.O Box 778
Hampton, NH 03843

Phone: 603.926.3345 extn. 214
Courer: 603.926.3345 extn. 211 or 209
Fax: 603.926.3521

ExxonMobil

Consultant Name: ExxonMobil Everett Terminal
Address: 52 Beacham Street
City/State/Zip: Everett, MA 02149
ExxonMobil Project Mgr: Arthur F. Powers
Consultant Project Mgr: Triumvirate - Visoth Sreng (Call (617) 799 - 4357 for sample related questions)
Consultant Telephone Number: 617-381-2802 **Fax No.:** 617-381-2954
Sampler Name: (Print) Visoth Sreng
Sampler Signature:

ESI Account #:
Invoice To: (ExxonMobil PM unless otherwise indicated)
Report To: arthur.f.powers@exxonmobil.com; sperry@triumvirate.com
PO #:
PROJECT #: NPDES Permit MA0000833
Facility ID #
Site Address SAME
City, State, Zip
Regulatory District (CA)

January 2010 1ST RAIN

Sample ID or Field ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Methanol	Sodium Bisulfate	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	HNO_3 (Red Label)	None (Black Label)	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: LC 50, pH, Salinity	Total Residual Oxidant, EPA 330.5	TS, and TSS , EPA 2540D	Ammonia, EPA 350.1 Rev 2.0 (1993)	TOC (5310B)	Al, Cd, Cr, Cu, Pb, Ni, Zn (EPA 200.7)						RUSH TAT (Pre-Schedule) *	TAT request (in Bus. Days)	Fax Results (yes or no)	Due Date of Report
Outfall 001 A	1-18-11	325	1	x										x		x					x									1 Gal Cube				
Outfall 001 A	↓	↓	1	x									x			x										x				250 mL Plastic				
Outfall 001 A			1	x										x		x						x								~~250~~ 125 mL Glass				
Outfall 001 A			3X	x										x		x							x								1 liter Plastic				
Outfall 001 A			1	x							x					x								x							125 mL Plastic				
Outfall 001 A	↓	↓	1	x							x					x									x							250 mL Plastic				

Comments/Special Instructions:
Laboratory case narative to NELAC Institute standard protocol.

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
QC Deliverables (please circle one)
Level 2 Level 3 Level 4 Other
* It will be the responsibility of ExxonMobil or its consultant to notify the TestAmerica Project Manager by phone or fax that a rush sample will be submitted.
TA Project Manager: Date:
Flow (MGD):
pH:
TRC:

Relinquished by:	Date	Time	Received by:	Date	Time
	1/19/11	10:45	P. Kaube	1/19/11	10:45
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time

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